

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PAC/24924	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/GB2006/000839	International filing date ( <i>day/month/year</i> ) 08 March 2006 (08.03.2006)	Priority date ( <i>day/month/year</i> ) 08 April 2005 (08.04.2005)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HALLIBURTON ENERGY SERVICES, INC.			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
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<input type="checkbox"/> Box No. VIII	Certain observations on the international application															

Date of issuance of this report 09 October 2007 (09.10.2007)	
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Authorized officer  Dorothee Mülhausen  e-mail: pt01.pct@wipo.int

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43*bis*.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/GB2006/000839

International filing date (day/month/year)  
08.03.2006

Priority date (day/month/year)  
08.04.2005

International Patent Classification (IPC) or both national classification and IPC  
INV. C09K8/508 C09K8/516 C09K8/68 E21B43/26 E21B33/138

Applicant  
HALLIBURTON ENERGY SERVICES, INC.

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



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NL-2280 HV Rijswijk - Pays Bas  
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Date of completion of  
this opinion

see form  
PCT/ISA/210

Authorized Officer

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2006/000839

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material:

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material:

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing:

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2006/000839

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-20,25-26
Inventive step (IS)	Yes: Claims	
	No: Claims	1-26
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V.**

**1 Reference is made to the following documents:**

- D1 : US 4 814 096 A (EVANI ET AL) 21 March 1989 (1989-03-21)
- D2 : WO 2004/022667 A (HALLIBURTON ENERGY SERVICES, INC; EOFF, LARRY, S; REDDY, RAGHAVA, B; W) 18 March 2004 (2004-03-18)
- D3 : US 2003/083204 A1 (CHATTERJI JITEN ET AL) 1 May 2003 (2003-05-01)
- D4 : US 6 497 283 B1 (EOFF LARRY S ET AL) 24 December 2002 (2002-12-24)
- D5 : US 2003/094122 A1 (EOFF LARRY S ET AL) 22 May 2003 (2003-05-22)

**2 Novelty (Art. 33(2) PCT)**

- 2.1 Document D1 (claims 1-11, col. 2, l. 41-55) discloses a method of introducing an aqueous flooding medium into a subterranean formation. The flooding medium comprises a hydrophilic/hydrophobic polymer (col 4-7). The subject-matter of claims 1 and 25 is deemed to be anticipated by this teaching.
- 2.3. Document D2 (claims 1-10, example 1) refers to a method (claims 10) of treating subterranean formations. As fluid loss control agents compositions are utilized which are identical with the claimed compositions of claims 1-26.  
The subject-matter of claims 1-26 is not novel in view of this teaching.

**3. Inventive step (Art. 33(3) PCT)**

Even if the Applicant were to overcome the above objections with respect to novelty, there would still remain a strong objection under Art. 33(2) PCT.

In the absence of any convincing evidence for a technical effect, the objective technical problem underlying the subject-matter of independent claims 1, 21 and 25 in view of documents D1 and D2 could only be formulated as to provide a further method of providing fluid loss control to a subterranean formation.

An obvious solution to this problem, which does not involve an inventive step as required by Art. 33(2) PCT would have been to test further loss control fluids such as disclosed in D1-D5.